INTERNATIONALSEARCHREPORT

International application No. PCT/JP2005/002378

A. CLASSIFICATION OF SUBJECT MATTER Int.Cl. H01L21/318, 21/316, 29/78

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) Int.Cl.⁷ H01L21/318, 21/316, 29/78

3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Published examined utility model applications of Japan 1922-1996
Published unexamined utility model applications of Japan 1971-2005
Registered utility model specifications of Japan 1996-2005
Published registered utility model applications of Japan 1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Electronic da	ta base consulted during the international search (name of da	na base and, where practicable, search terms	usea)
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where app	ropriate, of the relevant passages	Relevant to claim No.
Х.	JP 54-163679 A (Fujitsu Ltd.), 1979.12.26 page 2, lower left column, line 5 to 13 & EP 6706 A1 & US 4621277 A		1-14
X	JP 5-251428 A (Oki Electric Industry Co., Ltd.) 1993.09.28, column [0048], [0054], Fig. 5(B) (Family:none)		1-14
х	JP 10-256539 A (Fujitsu Ltd.), 1998.09.25 column [0039] to [0040], Fig. 3 to 6 & US 6215163 B1		1,4-14
х	JP 6-204465 A (Kawasaki Steel Corp.), 1994.07.22 column [0023] to [0028], Fig. 3 to 4 (Family:none)		1,4-14
Further documents are listed in the continuation of Box C.			
* Special categories of cited documents: "A document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed Date of the actual completion of the international search 25.04.2005 "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the priority date and not in conflict with the application but cited to understand the priority date and not in conflict with the application but cited to understand the priority date and not in conflict with the application but cited to understand the priority date and not in conflict with the application but cited to considered to invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family Date of mailing of the international search report 17. 5. 2005			
Name and mailing address of the ISA/JP Japan Patent Office		Authorized officer Yoshimasa Waseda	4R 2929

Telephone No. +81-3-3581-1101 Ext. 3471